

Comparison of the Major Coal Combustion Technologies with Natural Gas Technology											
Fuel	Combustion Technology	SO ₂		NO _x		PM 10		CO		Hg	
		lbs/mmbtu	lbs/MWh	lbs/mmbtu	lbs/MWh	lbs/mmbtu	lbs/MWh	lbs/mmbtu	lbs/MWh	lbs/mmbtu	lbs/MWh
Coal	Pulverized Coal Supercritical Boiler (1) (Wet FGR/SCR/LNB/DSI/FF)	0.15	1.53	0.08	0.82	0.0180	0.18	0.11	1.12	2.39E-06	2.43E-05
Coal	Integrated Gasification Combined Cycle (2) (diluent air)	0.17	1.15	0.13	0.85	0.0130	0.09	0.06	0.38	1.94E-06	1.31E-05
Coal/Coke	Circulating Fluidized Bed Boiler (3) (SNCR;Limestone inj; FF)	0.15	1.39	0.09	0.84	0.0110	0.10	0.13	1.17	1.09E-05	1.01E-04
Natural Gas	Natural Gas-Combined Cycle (4) (SCR/LNB/catox)	0.0019	0.02	0.0094	0.11	0.0119	0.14	0.0066	0.08		

* lbs/mmbtu = pounds of emissions/million btu heat input
 * lbs/MWh = pounds of emissions/megawatt-hour generated

* Wet FGD = Wet Flue Gas Desulfurization (SO₂ control)
 * SCR = Selective Catalytic Reduction (NO_x Control)
 * LNB = Low NO_x burners
 * DSI = Dry Sorbent Injection (SO₂ control)
 * FF = Fabric Filter (PM control)

* Diluent Air = NO_x control
 * SNCR = Selective Non-catalytic Reduction (NO_x control)
 * Limestone injection = SO₂ control
 * Catox = Catalytic Oxidation (CO control)

- (1) 600 MW unit burning bituminous coal with a heat input of 6,114 mmbtu/hr. Information from Longwood Power, LLC Permit No. R14-0024 for Longview Power Station, Longview, West Virginia.
 (2) 260 MW unit with a heat input of 1,755 mmbtu/hr using synehtic gas. Information from Tampa Electric Company Permit No. 1050233 for Polk County Power Station, Polk County, Florida.
 (3) 298 MW unit burning bituminous coal and coke with a heat input of 2,764 mmbtu/hr. Information from JEA Permit No. 0310045-011-AV for Northside Generating Station, Duval County, Florida.
 (4) 180 MW unit with a heat input of 2,132 mmbtu/hr using natural gas. Information from CPV Permit No. 81382, Cunningham Creek Facility, Fluvanna County, Virginia.

This information is intended as a guide to assist industries, utilities, and government agencies in assessing potential control options. Achievable control efficiency is site-specific and will depend on the type of fuel burned, design of the process, and type of control equipment used. It may not be feasible to meet the high removal efficiencies noted with some of these technologies in all plants. It should be recognized that the information provided is based on PERMIT LIMITS and does not necessarily represent the full capability of the technology. In particular, IGCC emissions may be lower with state-of the art technology.